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JACK-PINE BUDWORM EGG SURVEY ON
THE CHIPPEWA NATIONAL FOREST - 1969

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INTRODUCTION

The most recent outbreak of jack-pine budworm, Choristoneura pinus Free., peaked in 1966. The budworm populations have declined since. Annual trend surveys of budworm populations in the Lake States is made to observe fluctuations in order to develop a method which can predict severe outbreaks before damage occurs. This survey is part of the trend survey.

METHODS

Nine permanent plots are systematically scattered throughout the jack-pine type of the Forest. Each plot is a jack-pine stand at least 5 acres in size. Each sample consists of 4, 36 inch long branches (2 from mid-crown and 2 from lower-crown) taken from each of 10 dominant/co-dominant trees located in a cluster. The number of tips (current shoots) and the number of egg-masses and the degree of their parasitization was determined by a crew at Toumey Nursery. The average number of eggs per 100 tips was calculated with the assumption that an average egg-mass has 50 eggs. The egg numbers of parasitized egg-masses were reduced in proportion to the parasitization. Populations of more than 50 eggs per 100 tips are considered capable of causing severe damage, provided all budworms survive until pupation.

RESULTS

No budworm egg-masses were found on any of the sample plots (Table 1). This does not mean that the population has completely disappeared, but rather that visible defoliation is not likely to occur.



Table 1. Results of 1969 egg survey and population trends since 1967.

Plot No.	Location			Number of eggs per 100 tips		
	T	R	S	1967	1968	1969
301	141	31	8	21	0	0
302	144	31	3	26	0	0
303	146	31	16	125	1	0
304	145	30	10	35	0	0
305	145	29	10	36	9	0
306	147	27	11	565	4	0
307	145	27	2	5	0	0
308	144	25	8	10	0	0
309	38	25	14	20	0	0